In the office action mailed on October 9, 2001, the Examiner required a restriction of the invention and an election of species under 35 U.S.C. 121. Applicants elect Claims 1 and 3-12, drawn to an apparatus, to be examined. In addition, Applicants elect the support structure species of a metal wire (consistent with the present amendment) and elect the sample collection substrate species of organic aerogels.

IN THE SPECIFICATION

Please replace the paragraph beginning at line 24, page 2 with the following paragraph.

An object of the present invention is to provide a solid phase microextraction (SPME) device using aerogel and xerogel materials coated on a support structure, such as a stainless steel or Kovar® wire or glass fiber. It is further an object to provide a device that can be manufactured easily and quickly absorb or adsorb sample fluids – i.e., gases and liquids. Another object is to provide a sample collection medium using aerogel and/or xerogel materials to absorb either a wide range of analytes or selectively target specific analytes; this selectivity can be accomplished by alteration of the sol-gel chemistry and processing techniques used to make the aerogels and xerogels. The present SPME device is robust and formed of materials that are commercially available, inexpensive, and stable under high field radiation and high thermal stress. The

Please replace the paragraph beginning at line 11, page 3 with the following paragraph.

C2 The invention basically involves a SPME collection assembly comprising a support structure coated with organic and/or inorganic aerogels, xerogels, or combinations thereof. The support structure may be formed of stainless steel or Kovar® wire or a glass or high temperature plastic fiber. The stainless steel and Kovar® wire supports can be advantageous with silica substrates because their thermal expansion rates are comparable to glass. The aerogel and xerogel materials have extremely high porosity and surface area to absorb the targeted analytes and can be applied in various forms, including thin films and small particles. Inorganic and organic aerogels and xerogels can be doped with various metals and compounds to selectively adsorb specific analytes and confer other beneficial properties.

Please replace the paragraph beginning at line 7, page 5 with the following paragraph.

C3 The present invention is a solid phase microextraction (SPME) device or assembly using a support structure coated with a substrate formed of aerogel, xerogel, or combinations thereof. The xerogels and aerogels may be organic (i.e., carbon-based) or made from a variety of metal oxides (e.g., silica, tantala, zirconia). The gel solution can be doped with various metals or other compounds, thereby incorporating them into the solid network or lattice of the substrate material. The support structure may be formed of glass fiber, a high

temperature plastic, or a metal wire such as stainless steel or Kovar®. Kovar® wire is index-matched to the thermal expansion of glass, which is advantageous when using silica-based xerogel and aerogel coating materials. Stainless steel also has a thermal expansion similar to glass and is more robust than Kovar®.

Please replace the paragraph beginning at line 10, page 6 with the following paragraph.

The wire support structure **12** is made of stainless steel or Kovar®, which is a group of alloys containing iron, nickel, cobalt, and manganese characterized by a low coefficient of expansion. The expansivity of Kovar® is similar to that of glass, and thus it is used in making metal-to-glass seals. The alloys are useful in applications where a temperature variation can be expected. A representative alloy composition is Fe 53.8%, Ni 29%, Co 17%, Mn 0.2%. Glass or high temperature plastic fiber can be substituted for the wire, but the use of stainless steel wire provides a more robust SPME assembly and wider field collection applications. To improve the adherence or bonding of the aerogel substrate **14** on the support structure **12** (or to reduce its diameter), the wire or glass fiber support structure may be etched with acid.

Please replace the paragraph beginning at line 20, page 7 with the following paragraph.

The aerogel substrate may be designed to absorb a wide range of analytes, or a specific analyte or class of analytes. The ability to design both types of tips with a collection substrate that tolerates thermal cycling is advantageous. The